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Abbreviations

AIOS	All India Ophthalmological Society
BMW	Bio-medical Waste
C	Celsius
CDC	Centers for Disease Control and Prevention
CL	Contact Lenses
COVID-19	Novel corona virus disease
CoVs	Coronaviruses
F	Fahrenheit
FAQs	Frequently Asked Questions
H ₂ O ₂	Hydrogen Peroxide
HCP	Health Care Personnel
IAPB	International Agency for Prevention of Blindness
LRI	Lower Respiratory Tract Infection
MoHFW	Ministry of Health and Family Welfare
MPS	Multipurpose Solution
Mt	Meter
OPD	Out Patient Department
PPE	Personal Protective Equipment
RGP	Rigid Gas Permeable
Rx	Prescription
Sec	Seconds
URI	Urinary Tract Infection
UV	Ultraviolet
VA	Visual Acuity
WHO	World Health Organisation

Contributions

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COVID-19: Optometry Practice Guidelines

PREFACE

COVID-19 optometry and opticianry practice guidelines is an outcome by the All India Ophthalmological Society (AIOS) webinar meeting conducted on 27th May 2020 with the key AIOS governing council members, senior optometrists representing different professional associations, educational institutions, optical and contact lens industry.

The following members attended the Webinar

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These guidelines have been developed keeping the post lockdown COVID-19 primary eye care business in mind, with the aim to provide eye care in this COVID-19 times. The guidelines covered ranges from general optometry and opticianry guidelines, sub-specialty practices such as contact lenses, low vision, binocular vision, and prosthesis.

Post COVID-19 Optometry practice guidelines

There has been some evidence of presence of SARS-CoV-2, the virus that causes COVID-19 infection, in tears and conjunctival secretions, which opens up the possibility of infection spread within eye care services and putting patients as well as everyone involved in eye health services at risk.

We urge all the professional associations, optometrists, opticians, and optometry educational institutions to adapt and implement these guidelines to deliver the eye care services safely during these COVID-19 pandemic post lock down times.

Disclaimer :

Optical shops and optometry clinics have several overlapping activities and they often exist in the same premises. Therefore, guidelines are materially same for Optical shops and optometry clinics. Human understanding about the COVID-19 disease is improving and thereby guidelines are changing over time. This document may therefore be considered as a dynamic document that should be reviewed periodically failing which a sunset clause should be applied

Section 1: Introduction to Coronavirus Disease – 2019 (COVID-19) Optometry & Opticianry practice guidelines

**Version: 1
w.e.f. 04th June 2020**

Prepared by: Amod Gogate, Monica Chaudhry, Nagaraju Konda

In the current novel Coronavirus disease-2019 (COVID 19) situation, Central and State Governments have issued a series of guidelines primarily focusing on protection of interests of all the concerned and prevention of the spread of Infection. All India Ophthalmology Society (AIOS) has collected and collated expert inputs from both from India and abroad to generate the guidelines for eye hospitals and eye clinics. This was done with an objective to guide ophthalmic practitioners in the best interests of doctors, patients, health care personnel (HCP) and community in general.

Based on the presentation and discussions which followed, AIOS team invited Prof Monica Chaudhry to lead a team of experts and submit the proposed guidelines in a document which could then be a reference document for optometry and optical practices in the country.

This team of subject experts in Optometry and related subspecialties who further researched scientific evidence related to eye care practice in optometry and opticianry. Expert opinion from various stake holders such as senior optometrist from academia, research, private practice, business, and industry was obtained. With this context and complex nature of the current COVID-19 situation, in terms of unpredictable outcomes, the guidelines are required to be construed as bonafide opinions of experts available in the country.

It is necessary to appreciate that these guidelines do not substitute or override applicable statutory and ethical mandates. Similarly, for a given patient care scenario, it is ultimately the clinical judgment or decision of the optometrist prevails, which is being taken considering overall circumstances and the patient's underlying condition. In medical emergency conditions, the optometrist should refer the patient to competent ophthalmology practice. Needless to mention

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that as the situation evolves and unfolds, these guidelines also would warrant appropriate changes from time-to-time.

Considering the available information as on 03rd June 2020, these optometric practice guidelines were recommended to adopt and safeguard in the best interest of one and all concerned with primary eye care services and delivery.

Section 2: Regional, National and international guidelines for Optometry & Opticianry

Version: 1
w.e.f. 04th June 2020

Prepared by: Nagaraju Konda, Monica Chawdary and Amod Gogate

Novel Coronaviruses (CoVs) are a large family of viruses which may cause illness in animals or humans. As of June 2, 2020, according to the WHO, COVID-19 dashboard, outbreak has rapidly spread across the world with 6,140,934 confirmed cases and 373,548 deaths.¹ Amongst, 46.9% were reported in Americas, 35.2% in Europe, 8.7% in Eastern Mediterranean, 4.4% in South-East Asia, 3.0% in Western Pacific and 1.8% in Africa. India's share was 3.1% of the world reported cases. Most COVID-19 patients (approximately 80%) have a milder form of the disease and recover from it.²

As per the MoHFW advisory for managing health care personnel (HCP) in COVID-19 and non-COVID-19 hospitals, shall use PPEs appropriate to their risk profile.³ Optometrists involved in clinical care and management are classified under moderate risk, advised to use N-95 masks, gloves and protective eyewear. All Optometrists should be aware of common signs and symptoms of COVID-19, need for self-health monitoring and need for prompt reporting of such symptoms. In addition, optometrists working in eye hospitals follow the guidelines provided by the All India Ophthalmological Society's document on ophthalmic practice guidelines in the current context of COVID-19 document.

Open Resources

Optometrists should refer to some of the detailed COVID-19 open resources (FAQs, practice guidelines, posters, other publications, etc.) for regular updates by national optometry authorities, International Agency for Prevention of Blindness and the WHO for adoption and modification depending on jurisdiction.

- <https://www.mohfw.gov.in/>

- <https://www.college-optometrists.org/>
- <https://www.aoa.org/coronavirus>
- <https://www.cdc.gov/coronavirus/2019-ncov/about/index.html>
- <https://www.iapb.org/news/covid-19-resources-here-is-what-we-know/>
- <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>

WHO recommendations

WHO has recommended simple ways to prevent COVID-19 contamination at workplace⁴, such as:

1. Make sure workplaces are clean and hygienic
2. Promote regular and thorough hand-washing by employees, patients, and customers
3. Promote good respiratory hygiene in the workplace
4. Follow the travel advisory by the local authorities
5. Advise the employees stay home and customers to reschedule appointments if the temperature is 37.3 °C / 99.1 °F or more.

Ministry of Health and Family Welfare COVID-19 resources

- In case a COVID-19 patient is detected in such Non-COVID Health facility, the MoHFW guidelines for the same has to be followed. (Available at: <https://www.mohfw.gov.in/pdf/GuidelinestobefollowedondetectionofsuspectorconfirmedCOVID19case.pdf>)
- Guidelines for Preparation of 1% sodium hypochlorite solution (refer to MOHFW disinfection guidelines: <https://www.mohfw.gov.in/pdf/Guidelinesondisinfectionofcommonpublicplacesincludingoffices.pdf>.)
- Personal Protection Equipment (PPE) guidelines – <https://www.mohfw.gov.in/pdf/Guidelinesondisinfectionofcommonpublicplacesincludingoffices.pdf>

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- Workplace disinfection guidelines -
<https://www.mohfw.gov.in/pdf/GuidelinesonpreventivemeasurestocontainspreadofCOVID19inworkplacesettings.pdf>

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1. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
2. <https://www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf>.
3. <https://www.mohfw.gov.in/pdf/GuidelinesonpreventivemeasurestocontainspreadofCOVID19inworkplacesettings.pdf>
4. https://www.who.int/docs/default-source/coronaviruse/getting-workplace-ready-for-covid-19.pdf?sfvrsn=359a81e7_6

Section 3: General Optometry Practice Guidelines

Version: 1
w.e.f. 04th June 2020

Prepared by: Monica Chaudhry, Nagraju Konda, and Amod Gogate

Front desk & Staff wellbeing (including commuting, during & after working hours)

1. Carry only essential items. Carry own stationery and sanitize regularly mobile phone with 70 % alcohol based sanitisers. Keep phone in pocket or personal bag.
2. Lunch box and water bottles to be put in disposable bag and discarded on reaching home
3. Minimum jewelry specially on hands and watch to be sanitized or avoided if possible
4. Personal washed clothes to be worn and washed daily after reaching home
5. Prefer keeping a pair of Footwear separate to work one that can be easily cleaned.

COVID-19 guidelines at work

1. Social distancing to be always maintained.
2. Wash hands/ sanitise hands-on arrival. Hand hygiene protocol to be followed
3. As recommended by the government of India, it is recommended to download Arogya setu App by all staff and patients, with location enabled in his/her mobile.
4. Screening customers for signs of Health at the entry preferred / otherwise a self-declaration of nonexistence of COVID-19 like symptoms is recommended (Table 2). Look out for signs of
 - Fever or chills, Cough, Shortness of breath or difficulty breathing
 - Fatigue, Muscle or body aches, Headache
 - New loss of taste or smell, Sore throat, Congestion or runny nose
 - Nausea or vomiting Diarrhea
 - or as per the updated list of Centers for Disease Control and Prevention (CDC)
5. Any staff reportedly suffering from flu-like illness should not attend office and seek medical advice from local health authorities. Such persons, if diagnosed as a

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suspect/confirmed case of COVID-19 should immediately inform the office authorities.

6. Sanitize, hands phone, car key, spectacles, hand bag on arrival
7. No handshake for greeting. Avoid touching door knobs and handles as far as possible – this can be done with keeping doors open wherever possible
8. Notices for all these can be put across the clinic / optical store to reinforce these habits. A checklist to be pasted near the screening counter for information about the measures.

Staff	Clients / Patients
<ul style="list-style-type: none">• Check the body temperature (Normal 36.5–37.0 °C/97.7 – 98.6°F)• Frequently wash hands using soap & water for a minimum of 20 sec.• When not possible to wash hands, sanitize with 70% Isopropanol.• Wear mask (3 layer medical mask / N95) at all times• Use disposable gloves (Nitrile / Latex) while attending the clients• Maintain physical distance of 1.0 to 2.0 mt.• Do not touch face, eyes or mouth without washing hands• Cover mouth with a tissue when cough or sneeze. Bin the tissue and wash hands immediately.	<ul style="list-style-type: none">• Check the body temperature (Normal 36.5–37.0 °C/97.7 – 98.6°F)• Hand sanitize all before entering into the practice• No mask, no entry• Only touch frames when shortlist the purchase• Maintain physical distance of 1.0 to 2.0 mt.• Do not touch face, eyes or mouth without washing hands• Cover mouth with a tissue when cough or sneeze. Bin the tissue and wash hands immediately.

Table 1: General Clinic Guidelines*

*Monitor the staff & customers based on the above mentioned guidelines. If not followed, discourages clinic entry / appointments.

Use the guidelines in conjunction with regional, national and international regulatory recommendations.

Basic preventive measures: observed by all (employees and visitors) at all times

1. The basic preventive measures include simple public health measures that are to be followed to reduce the risk of infection with COVID-19.
 - Physical distancing of at least one meter to be followed at all times.
 - Use of face covers/masks to be mandatory.
 - Practice frequent hand washing /use of alcohol based hand sanitizers (for at least 20 seconds).
 - Respiratory etiquettes to be strictly followed. This involves strict practice of covering one's mouth and nose while coughing/sneezing with a tissue/handkerchief/flexed elbow and disposing off used tissues properly.
 - Self-monitoring of health by all and reporting any illness at the earliest
2. A notice advising patients NOT TO ENTER IF ILL to be posted on the entry door

Appointment suggested guidelines

1. Appointments to schedule such that the flow in the clinic / store will minimize people's movement inside premises and try to reduce time spent during the visit.
2. Request patient to confirm if they are exposed to someone who is positive for COVID
3. **Check list questions** (Table 2) to be asked during appointment or at the reception before eye exam. If Yes to any (high risk precautions to be taken)
 - a. Occupation to rule out if the job involves exposure to large groups.
 - b. Any family member on COVID Duty (Police/Army/Doctor/Drivers etc.) living in same house
 - c. Travel (National, Inter-district or Inter-state) particularly to hotspot areas or international travel in past 28 days
 - d. Any history of symptoms (URI/LRI/FEVER/DIARRHOEA) in past 28 days
 - e. Contact any contact with suspected or diagnosed COVID Case in the past 28 days

4. Table 2: COVID-19 screening questionnaire*:

As per the guidelines issued by the Ministry of Health and Family Welfare, Government of India and World Health Organisation (WHO), we would like to request you to provide the following information. We would be thankful to you if you could spare few minutes of your time to answer below questions to help . us screen for COVID-19. Your response will help us to prevent the risk of COVID-19 contamination to our patients, customers and their attendants. This information may be shared with government authorities if needed to help the COVID-19 tracers.

Name:		Age / Gender:	
Phone Number:		Email id:	
Body temperature: °C / °F		Occupation:	
Complete address:			
Sl. No	Questions on COVID-19	Yes	No
1	Do you or your accompanying relative or a family member staying with you have symptoms of Fever, Cough, Sneezing, Sore throat, Extreme tiredness/body ache, difficulty in breathing, Loss of smell and taste		
2	Have you or a family member staying with you travelled outside city to any other city/town/place/containment zone/country in past 21 day? If Yes, mention details. Details of place visited: _____		
3	Did you or a family member staying with you have any exposure to a confirmed COVID-19 patient or to a suspicious patient in last 21 days?		
4	Have you or a family member staying with you visited a COVID-19 health care facility in the past 21 days? If Yes, mention purpose: _____		
5	Have you downloaded Arogya Setu application on your smart phone? If yes, would you please indicate your status?		

Signature of the patient: _____ Date: _____

Name & Signature of the staff: _____ Date: _____

*Use appropriately where required in the optometry practice

Waiting area, Reception and billing

1. Physical distancing to be observed at all times and in all areas and markings on floor can be made to help them maintain it
2. Sitting to be permitted in alternate chairs in the waiting area to ensure that people are seated at least one chair apart.
3. Reducing instances of hand to hand transfer (handing over of bills/ prescriptions) and avoiding cash transactions wherever possible
4. Recording patient's information: demographics, name and address details of the patients and attendants to be noted for future contact tracing if needed.

Guidelines for Optometry / Optical Store managers

- Ensure that active screening of all staff is done daily (by means of thermal screening / self-declaration especially at the start of the duty / update Arogya setu App)
- All store and clinic staff is encouraged to monitor their own health at all the time for appearance of COVID-19 symptoms and report them at the earliest.

General cleaning guidelines of Optometry clinics

- Optical store should be cleaned every evening after office hours or early in the morning before the customers start to walk-in.
- If contact surface is visibly dirty, it should be cleaned with soap and water prior to disinfection. Prior to cleaning, the worker should wear disposable rubber boots, gloves (heavy duty), and a triple layer mask
- Start cleaning from cleaner areas and proceed towards dirtier areas.
- All indoor areas should be mopped with a disinfectant with 1% sodium hypochlorite or phenolic disinfectants.
- High contact surfaces such handrails / handles equipment like telephone, printers/scanners, and other office machines should be cleaned twice daily by mopping.

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- Frequently touched areas like table tops, chair handles, pens, diary files, keyboards, mouse, mouse pad, tea/coffee dispensing machines etc. should specially be cleaned.
- For metallic surfaces like door handles, security locks, keys etc. 70% alcohol can be used to wipe down surfaces where the use of bleach is not suitable
- Hand sanitizing stations should be installed in store premises (especially at the entry) and near high contact surfaces.
- Carefully clean the equipment used in cleaning at the end of the cleaning process.
- All employees should consider cleaning the work area in front of them with a disinfecting wipe prior to use and sit one seat further away from others, if possible

70% Alcohol can be used to wipe down surfaces where the use of bleach is not suitable, e.g. metal. (Chloroxyleneol (4.5-5.5%)/ Benzalkonium Chloride or any other disinfectants found to be effective against coronavirus may be used as per manufacturer's instructions)

Publicity material: It is advised to have prevention resources and public information resources used in the clinics (preferably from MoHFW website)

Personal Protective Equipment (PPE)

PPEs are not alternative to basic preventive public health measures such as hand hygiene, respiratory etiquettes which must be followed at all times. As a safety guideline, the following were recommended –

1. For all Optical store staff =

- 3 layer medical mask, Nitrile / Latex gloves – Wear at all times, to be disposed daily
- Face shield – especially when talking frame measurements, to be disinfected daily

2. For Optometrist staff =

- 3 layer medical mask, nitrile / latex gloves – at all times, to be disposed daily

Good to have = N95 mask

- Face shield / eye protective goggles – especially when doing Eye exam from close distance, to be disinfected daily

Re-use / Disinfection / disposal of PPE

- N95 mask can be reused with 72 hours of air drying between uses. The reuse can be up to a maximum of 4 times
- Eyeshields and goggles can be cleaned with 70% alcohol solution/ Alcohol Swab.
- This should be done prior to beginning the work and should be repeated at the end of workday prior to leaving the store.
- Please keep these in possession and avoid mixing it with other staff. Preferable to write name in one corner for identification.
- Disposal as per guidelines of local government / competent authority. Dispose every day after use.
 - 3 PLY Masks, Head Caps, PPE Suits, Disposable Gowns in Yellow bin
 - Gloves in the red bin

Optometrists must follow the laid down protocol for disposing off PPEs as detailed in infection prevention and control guideline available on website of MoHFW.

Optometry clinic general examination guidelines

1. Slit lamp should have the barriers and / breath shield. Preferably sanitized after each patient
2. Consumables should not be left uncovered and all safety to be followed
3. Disinfectant to be kept handy and Equipment which is frequently used should be disinfected frequently and the tables, furniture to be disinfected every two hours
4. Clean patient contact areas with alcohol wipes, like forehead, chin rest of AR, Keratometer and slit lamp, trial frame and torch.

5. Avoid checking stereopsis and colour vision , near vision as charts cannot be disinfected and have to be handled
6. Equipment and equipment part that come in contact with the eye: use alcohol swipes like Applanation tonometer, gonioscope, pachymeter, axial length probe should be disinfected as per AIOS guidelines.

References

1. Ministry of Health & Family Welfare (MoHFW)
<https://www.mohfw.gov.in/pdf/GuidelinesonpreventivemeasurestocontainspreadofCOVID19inworkplacesettings.pdf>
2. Centers for Diseases Control & Prevention - Frequently Asked Questions
Updated - April 23, 2020: <https://www.cdc.gov/coronavirus/2019-ncov/faq.html#How-to-Protect-Yourself>
3. American Academy of Ophthalmologists – Coronavirus & Eyecare - May 15, 2020: <https://www.aao.org/covid-19>
4. The Royal College of Ophthalmologists and The College of Optometrists in UK, on Ophthalmology and Optometry Patient Management during the COVID-19 Pandemic : <https://www.college-optometrists.org/the-college/media-hub/news-listing/patient-management-during-the-covid-19-pandemic.html>
5. COVID-19 Framework for Primary Eye Care Providers from FODO (Federation of Ophthalmic & Dispensing Opticians) that represents optical practices, optometrists and opticians in the UK and Republic of Ireland. - May 17, 2020: <http://news.fodo.com/linkapp/cmaview.aspx?LinkID=pageid1007833199t9~f~zfjq~zzh9nz~z~x~f~n>
6. European Council of Optometry & Optics (ECOO) Newsletter – March 2020
<https://www.ecoo.info/2020/03/31/ecoos-newsletter-march-2020/>
7. Optometry Council of India (OCI) ASCO, IOA and IOF "Guidelines for Optical Stores & Optometry Practices in India (version 1)"

Section 4: Guidelines for Optometry Care

Version: 1

w.e.f. 04th June 2020

Prepared by: Monica Chaudhry, Rajesh Wadhwa, Amod Gogate

General examination guidelines for optometry patients

1. All other guidelines for running ophthalmology OPD and standard operating procedure as described earlier to be followed
2. Maintain social distancing all throughout
3. One patient at a time without attendant (if possible)
4. Must have masks, Aprons (to be washed everyday) , protective eye wear and face breath shield for close procedures .Gloves are desirable and not mandatory and gloves should be disinfected after each examination
5. Rooms and instruments should be thoroughly disinfected after each patient examination. Slit lamp / AR and breadth shield should be disinfected after every use
6. Minimize the contact time as much as possible

Steps of general eye examination and refraction

1. A very quick history taking and recording of the important finding only to be done during the examination contact time. Basic history taking can be done on phone so that time in examination room can be minimized.
2. Have any discussions with the patient (e.g. symptoms and history, advice given) at a safe distance.
3. *Lensometry for old spectacle power-* If the patient has the old prescription ,lensometry may be avoided .In case lensometry is required .Spectacle has to be removed by the patient himself , hold with a soft tissue paper and wipe with alcohol wipe or wash with soap and water before lensometry

4. *Minimize physical contact* with patients include: asking the patient to remove their spectacles themselves, asking CL patients to insert and remove their CLs themselves (if possible) asking patients to pull their lower lids down themselves if you are instilling eye drops, or using a tissue between your finger and their lid if you need to pull it down.
5. Occlusion while recording VA should be done with patients own self
6. Near VA should be either plastic print card which can be sanitized after every use or take photocopy prints of the Near charts and dispose off after every patient
7. 6/6 and N 6 visual acuity with no symptoms , avoid refraction
8. Record Visual acuity with habitual glasses and use your judgement to refract patients or just simply refine the refraction by doing retinoscopy over the glasses
9. Refinement of 0.25 cylindrical can be avoided
10. Make a duplicate pair from the old prescription and 6/6 VA as far as possible .
11. Do not touch the trial lenses with patient while doing retinoscopy , Prefer using the lens rack
12. AR to be used only if essential
13. Trial frame to be sanitized with alcohol wipes after every patient. A still better option is to have two trial frames and wash with soap and water and let it dry with disposable tissue paper after every use. Wipe with alcohol wipe and let it dry again before next use
14. Do cycloplegic refraction only if very essential. To avoid crowding the waiting room with dilating patients (for retinal exam or for refraction), ask the parents to instill drops at home and return (can plan the next visit same day or next). If cannot return, ask them to instill in the car and come back in 1 hour.
15. Ask patients and attendants to sanitize their hands before and after leaving exam rooms.
16. No colour vision , stereopsis or any other test which has multiple touch by patients and cannot be sanitized as they are made of mostly made of cardboard

17. All other investigations guidelines for running OPD and standard operating procedure as described in AIOS Guidelines for COVID-19 to be followed.

References:

- The College of Optometrist (UK) <https://www.college-optometrists.org/the-college/media-hub/news-listing/coronavirus-covid-19-guidance-for-optometrists.html>
- All India Ophthalmology Society (AIOS) Ophthalmic practice guidelines in the current context of COVID-19 v1

Section 5: Guidelines for Optical Dispensing

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w.e.f. 04th June 2020

**Prepared by: Rajesh Wadhwa, Ajay Mishra, Jyoti Dave, Ramesh Pillai, Snehal
Turakhia, Nagaraju Konda**

General guidelines for Optical store area

- Always follow advisories from the regional, national and international authorities. Follow and implement new normal guidelines at the optical store (Figure 1) and applicable general optical store guidelines (Table 1).
- Sanitising the floor 3 to 4 times daily with 1% sodium hypochlorite or soap and water.
- Frequent sanitisation of door handles, counter tops, and waiting area with 1% sodium Hypochlorite or before each customer encounter.
- Sanitisation of frequently touch points with 70% isopropanol between the customers during the working hours especially optical dispensing, and counselling areas.
- Frequently sanitise the front desk area and IT equipment such as mouse, keyboard etc. with 70% isopropanol.
- Decrease the touch points wherever possible. Eliminate paper, pen etc. and encourage collect the information in digital format. Place non-contact hand sanitation stations at the entry and install no-touch trash bins.
- Schedule the customer appointments to avoid waiting time and accelerate the dispensing process to minimise the customer exposure time in the premises.
- Before arrival collect the customer details on phone.
- Display relevant COVID-19 public awareness messages in the store. Encourage namaste or non-contact greetings.
- Educate and circulate written COVID-19 education material to all.
- Follow a contingency plan to maintain continuity of operations. Have two teams which may alternate their duties at workplace. Avoid inter-change of staff between branches

Post COVID-19 Optometry practice guidelines

- Facilitate delivery and receipt of dak at the store entry point. Avoid meeting suppliers with travel history from containment zones. Encourage home deliveries through courier or outside-the-shop deliveries
- Older employees, pregnant employees and employees who have underlying medical conditions should not be exposed to work requiring direct contact with customers. Take extra precautions.
- Employees residing in notified containment zones are advised to follow the guidelines from the local authorities.
- Encourage the staff using their private vehicles for commuting. Mandate the staff using public transport to sanitise themselves before entering into the store.
- Replace the physical bill with softcopy. Follow cash handling guidelines (Figure 2).
- Control adequate ventilation for outside air and avoid using centralised air conditioning systems

Frame / Lens Selection

- Always follow the new normal guidelines at the optical store (Figure 1) and applicable general optical store guidelines (Table 1).
- Encourage the customers to first select the spectacle frames by visual inspection before handling. Provide least number of spectacle frames for trial purpose.
- All frames touched/tried by patients to be set aside in a separate tray for sanitisation.
- Tried spectacle frames by customer or handled by the optician should be sanitise with 0.5% hydrogen peroxide (H₂O₂) or clean with soap and water before being returned to display stands.
- Sample lenses or any touch points should be sanitised before and after demonstration.
- Use non-contact methods such as digital devices, pictograms for lens selection.

Parameters measurements

- Always follow the new normal guidelines at the optical store (Figure 1) and applicable general optical store guidelines (Table 1).

- Sanitise the optical dispensing equipment such as PD measurement ruler, digital tablets, PALS centration charts etc. that are used for a customer must be sanitised after every customers.
- Ensure PPE wear do not effect the optical dispensing measurements including IPD, fitting heights etc.
- Reduce contact time with customer and consider making fitting measurements once they depart the store.

Lens fitting and delivery

- Always follow the general guidelines, new normal guidelines at the optical store (Figure 1) and general optical store guidelines (Table 1) where applicable.
- Ensure frequent sanitisation of all the fitting tools in the laboratory before and after use.
- Avoid the visitors to the fitting laboratory. Install the non-contact hand sanitisation stations.
- After lens fitting and before dispatch, sanitise the product with 0.5% H₂O₂ or 70% Isopropanol.
- Install a separate dak for collection and dispatch to avoid risk of contamination.



Figure 3. Ophthalmic lens handling in the fitting laboratory



Figure 4: Staff wearing Personal protective equipment in the ophthalmic lens laboratory

Guidelines for protective eye wear

- Protective eye wear is one of the reusable components of the PPE kit.
- Use / protect safety eyewear according to the product labeling and Govt. requirements
- All the protective eye wear should have wide extensions to cover the side of the eyes
- Ensure appropriate cleaning & disinfecting procedures

Use safety glasses during care activities where

- Splashes and sprays are anticipated, which typically includes aerosol generating procedures.
- Prolonged face-to-face or close contact with a potentially infectious patient is unavoidable.

Extended use of safety glasses

- Do not remove eye protection between patient encounters.
- Eye protection should be removed and reprocessed if it becomes visibly soiled or difficult to see through.
- Health Care Personnel (HCP) should take care not to touch their eye protection. If they touch or adjust their eye protection they must immediately perform hand hygiene.
- HCP should leave patient care area if they need to remove their eye protection.

Reprocessing Eye Protection

- Adhere to manufacturer instructions for cleaning and disinfection.
- When manufacturer instructions for cleaning and disinfection are unavailable, such as for single use disposable face shields, consider:
 - While wearing gloves, carefully wipe the inside, followed by the outside of the face shield or goggles using a clean cloth saturated with neutral detergent solution or cleaner wipe.
- Carefully wipe the outside of the face shield or goggles
 - Using a wipe or clean cloth saturated with EPA-registered hospital disinfectant solution
 - Clean water or alcohol to remove residue.
- Fully air dry or use clean absorbent towels.
- Remove gloves and perform hand hygiene.

Acknowledgement: Essilor India for providing ophthalmic lens handling (Figure 3) and staff wearing PPEs (Figure 4) pictures

Post COVID-19 Optometry practice guidelines



Figure 1: The new normal at optical store

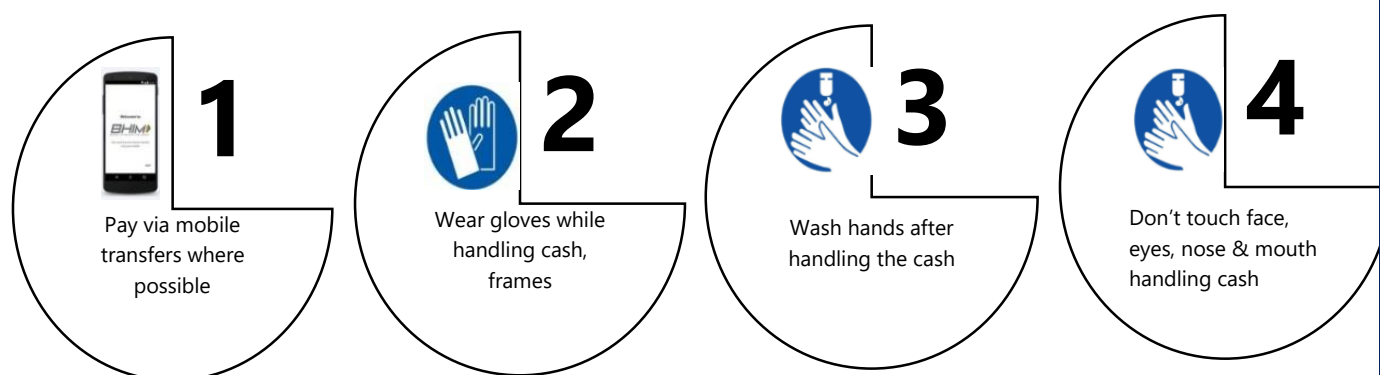


Figure 2: Guidelines for cash handling

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- Essilor document – Essilor safe shop protocol
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Section 6: Guidelines for post COVID-19 Contact Lenses Practice

Version: 1
w.e.f. 04th June 2020

**Prepared by: Yeshwant Saoji, Amod Gogate, Khemraj Nackwal, Rajesh Kumar,
Rupam Sinha**

General guidelines for CL practitioners

- Use the recommended guidelines in conjunction with local, country, and regional regulatory recommendations. Always follow the general optometry clinic guidelines (Table 1) and general best contact lens practice guidelines.
- Contact lens (CL) practitioner and clinic staff should always wear approved personal protective equipment (PPE).
- Avoid touching the eyes, face, & mouth while handling lenses or with unwashed hands.
- Clean spectacles using water and soap several times during the day.
- Control adequate ventilation for outside air and avoid using centralised air conditioning systems

Prior to scheduling appointments

- Ensure no COVID-19 symptoms prior to appointment. Lower patient attendance to practice.
- Minimise the impact on wider healthcare services by manage asymptomatic CL adverse events.
- Provide teleconsultation prior to clinic appointment to minimise the chair time.
- Schedule follow-up appointments only when necessary. General hygiene steps need to be followed.

Steps for fitting contact lenses to new wearers

- Complete the CL pre-fitting evaluation steps, as necessary - maintain safety standards
 - Refraction, updated Spects Rx,
 - Eye health to see no contra-indication for CL wear
- For examining the patient on Slit lamp, follow the instrument sanitization guidelines

During Contact Lens Trials & Fit Assessment

- Use disposable trial lenses for all SCL fitting and discard immediately after trial
- Before trying the lens on patient's eyes, sanitise the blister pack and wash hands with soap and water and then open the pack and handle lenses.
- Use slitlamp bio-microscope breath shield to prevent contamination via respiratory droplets. Disinfect all the slitlamp contact points such as forehead rest, chin rest, joystick etc. before each use
- Educate the CL wearer not to use
 - lenses on extended wear schedule and follow the safe lens wear recommendations.
 - someone else's lenses.
 - CLs while swimming or shower. If necessary, wear swimming goggles.

Diagnostic CL maintenance guidelines

- Use 2-step H₂O₂ based systems for disinfecting *diagnostic rigid gas permeable (RGP) lenses* for 3+ hours. Rinse RGP CLs using recommended multipurpose solution (MPS). Pat dry with clean lint free tissue paper and store dry.
- Use 2-step H₂O₂ based systems for disinfecting diagnostic hybrid & soft contact lenses for 3+ hours. Neutralise using one step H₂O₂ based system as recommended by the manufacturer or 6+ hours. Rinse using recommended multipurpose solution (MPS) and store in a clean lens case.

General guidelines for existing CL wearers / patients

- Continue safe contact lens hygiene practices
 - Always wash hands with soap and water before handling lenses for 20 seconds as recommended by the WHO.
 - Dry hands well with a lint free towel or tissue paper. Identify and disinfect the frequent touch points to minimise the risk of contamination.
- Healthy contact lens wearer doesn't impact the spread of COVID-19, they may continue to wear their lenses.
- Advise to discontinue CLs in case of ill health or adverse events such as red eyes, flu-like symptoms and contact your contact lens practitioner.

Contact lens care & maintenance guidelines

- Practice appropriate recommended lens care and hygiene guidelines. Handle lenses over a clean and disinfected surface.
- Avoid/minimize the use of unnecessary CL accessories
- Encourage using lenses on disposable modality and discard lenses according to the manufacturer's recommendation.
- Where possible, use disposable diagnostic lenses. Disinfect all CL equipment using recommended disinfection protocol.
- Dispose daily disposable lenses at the end of the day. Continue to use daily CL care products and lens case care as per the practitioner recommendations.
- If not using CLs regularly, replace the lens storage case solution as per the recommendation.
- Do not switch contact lens care products without consulting your practitioner.
- Discard used solution from lens storage case after every use. Prefer lens case without ridges.
- Clean lens case with contact lens solution. Clean lens case with clean tissue and air dry upside down on a clean tissue. Keep lens case away from humid area e.g. bathroom
- Replace lens storage case every month or after having cold or flu like symptoms.

References:

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Section 7: Guidelines for Ocular-Telehealth

Version: 1
w.e.f. 04th June 2020

Prepared by: Ajeet Bhardwaj, Monica Chaudhry, Pooja Singh

- Ocular-Telehealth will play an important role during COVID-19 times, in cases where there is no need for the patient's to physically consult the Optometrists. This will help in preventing the virus contamination.
- Remote consultations and online primary eye care services provided over a video-link, by phone, or appropriate web application can benefit patients, save resources and help meet public demand for convenient access.
- Make the patient safety as a first priority and provide effective safeguards to protect the patient confidentiality. Obtain prior informed consent and follow the law of land.
- In case if the patient's condition is not in prevue of optometrist's clinical competency, can't prescribe because it's unsafe, refer to an appropriate services for further management.
- Optometrist name, professional details should be informed to all patients while establishing a dialogue and make sure patient understands how the remote consultation works.
- Inform patients that they can only advice/prescribe if the tests performed provide accurate results and safe to prescribe.
- Review the prior medical history, clinical records, for important information prior to online examination. Use appropriate technology platforms and tools available to perform adequate clinical tests where necessary.
- Make appropriate arrangements for aftercare, and referral. Unless patient objects, share the relevant information with colleagues and other healthcare, RMPs involved in their care to support ongoing monitoring and treatment.

Post COVID-19 Optometry practice guidelines

- Provide information about all the options available to them, including declining the advice, in a way they can understand.
- *Continue education programs during COVID-19:* Provide online continue education programs, and assessment methods using appropriate tools and online platforms while maintaining professional optometry authority's guidelines.
- As recommended by MoHFW and CDC (Centre of Disease control), visiting a clinic or hospital in the current situation is only to be reserved for emergency cases, as the risk of contracting contaminated surfaces is exponentially higher. Instead, it is advisable that patients should be reviewed remotely using Telehealth tools. This reduces the examination time and the increased load that routine visits to hospitals put on the healthcare system.
- Telehealth adoption on our practices will lower practitioner's costs and will reduce patients travel and waiting time. Healthcare providers practicing via Telehealth will be the preferred option for patients during a pandemic and the time following it.
- *For more details, please refer to Annexure 1: "Innovative Approaches – Telehealth for opticians, optometrists, ophthalmologists and public health experts post COVID-19" by Ajeet Bhardwaj.*

Section 8: Guidelines for Binocular Vision Assessment

Version: 1
w.e.f. 04th June 2020

Submitted by: Jameel Rizwana, Monica Chaudhry

These guidelines are written from the logical perspective of maintaining physical distancing, being able to adhere to the general and instrument disinfection guidelines, reducing the time spent with the patient, and customizing the work-up based on the primary or chief visual complaints. Apart from adhering to the standard operating procedures for physical distancing, hand hygiene, administration of the COVID-19 symptoms checklist and disclaimer, use of personal protective equipment including compulsory masks for the children and attendant is to be ensured (Table 1). Only one attendant is recommended and it is advised not to bring siblings or grandparents who belong to the vulnerable category as attendants. Similarly children with special needs and physical disability are to be considered under the vulnerable category and appointments are to be given only on triaging basis. If an assessment is required for children with special needs disinfection protocol to be ensured for wheel chairs, and any specific accessories that accompanies the child.

The Optometrists have to ensure the disinfection of trial frame, lenses used during refraction, spectacles, polarizing glasses, stereopsis test places, red green filters, toys, fixation targets and cover paddles after every examination. It is also important to keep the examination rooms open and when a child is found to have flu or related symptoms, examination need to be deferred and appropriate referral has to be made.

As eye care professionals are used to touch the kid during examination, it is important to consciously ensure not to touch the kids during assessment and to use the help of the parent or caregiver to assist during visual acuity assessment, testing eye alignment, performing refraction and slit lamp examination.

Pediatric work-up and refraction specific guidelines

Visual acuity assessment: The optometrist should use non-contact occlusion such as tissue papers and extra precautions need to be taken to avoid peeking. In younger children, parents can use hold the tissue paper to occlude, after appropriate hand hygiene is ensured for them. Use handheld auto-refractors to assess refraction as it has been validated in the pediatric population.¹⁻³ Over refraction with retinoscopy can be done if visual acuity is 6/6 and wherever applicable to reduce the time taken for work-up.

What can be omitted from the regular work-up during the COVID-19 times to reduce the work-up time?

- Children less than 3 years seeking emergency consultation can be directly referred to the Ophthalmologist
- Conventional routine sensory and motor evaluation procedures such as stereopsis and worth four dot testing can be deferred in children who come for routine testing and in refractive error testing.⁴ To avoid touch and maintain physical distancing, Hirschberg can be done to document eye alignment in children above 12 years of age without a primary complaint of strabismus.
- Un-dilated refraction can be deferred if a cycloplegic refraction is planned, and subjective acceptance can be deferred wherever the decision is to be taken based on cycloplegic refraction.
- Refer to AIOS guidelines for ophthalmic emergency referrals

Binocular vision and Vision therapy clinic guidelines

History taking

As history taking is an important component of a binocular vision/ orthoptic clinic work-up, it is important to reduce the time taken for the same. The history can be administered over phone or the symptom survey can be emailed if patients have prior appointments and email access.

Clinical protocol:

Use over refraction to quickly recheck the refraction. Borish delayed testing and modified Borish delayed testing⁵ can be utilized to manage refraction in the presence of accommodative dysfunctions to reduce the need for cycloplegic refraction. In the place of a comprehensive binocular vision assessment, the minimum test battery⁶ that includes phoria measurements at distance and near, binocular accommodative facility, near point of convergence and near point of accommodation can be performed. This is to ensure that the binocular vision assessment timing is reduced and also to ensure that common non-strabismic binocular vision anomalies are not missed. Additional testing can be decided by the clinician based on the visual complaints of the patients.

It is important to optimize and reduce the time spent for refractive or prism adaptation which is done as part of the decision making process in binocular vision.

Vision Therapy (VT)

In regular optometry clinics where infrastructure support is not available to maintain physical distancing during In-Office vision therapy, software based home therapy should be prescribed. In general software based home vision therapy options can be explored towards providing tele- vision therapy consultation and management. Available indigenous software such as the Bynocs⁷ can be utilized towards the same. The vision therapy instructions can be emailed or sent as photos to the patient to reduce the use of paper copies. Also it is advised that the patient procures their own home vision therapy kit for additional teaching and training rather than using the equipment in the clinic. Due to the increased use of digital devices and related visual complaints, webinars can be organized for patients and parents to raise awareness and visual hygiene regarding binocular vision dysfunctions during the long hours of work from home.

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Section 9: Guidelines for post COVID-19 Low Vision Practice

Version: 1
w.e.f. 04th June 2020

Prepared by: Monica Chaudhry, Sumit Grover, Rajesh Wadhwa

1. Discourage old and high risk patients for essential examination only
2. Maintain all protocol of refraction and eye exam
3. Minimize eye exam time at clinic by doing a quick low vision exam and catering to desperate need of the patient during the pandemic time.
4. Take history on phone as far as possible
5. Previous prescription of glasses may be continued
6. Avoid any slit lamp eye exam and intervention procedures.
7. The basic investigations to consider are distance VA and near VA (*with newspaper or photocopy of the near vision chart (discard this after patient exam)*)
8. Defer for later, testing for colour vision, stereopsis and contrast acuity
9. Quick Field assessment by confrontation and disposable Amsler chart only if needed
10. Trial of devices should be minimized and best possible estimated device should be only attempted for trial. The disinfection process for each device used post assessment should be followed.
11. If the optical devices coatings can be an issue with alcohol disinfection, simple soap and water rinsing should be preferred. Alcohol wipe for metal / plastic surface can be done and if possible UV chamber disinfection to be done of each device after each low vision trial .
12. Video magnifiers for near are best recommended during this pandemic. The magnification can be varied and works well in most of the cases.

13. Hand-held monocular Telescopes prescription during this time is risky and patient can be at risk to touch the eye frequently during its use. Spectacle mounted telescopes are preferred prescription as of now.
14. Hand magnifiers are not a good option to be prescribed as they can touch surfaces when not in use. For existing users of Hand magnifiers proper care and sanitization to be explained and reinforced to the patient. Frequent washing of the device with soap and water is possible in non-illuminated hand magnifiers but not in illuminated ones. Alcohol wipes may be the best option to disinfect the self-illuminated hand magnifiers.
15. Stand magnifiers need close contact with eye and can be high risk to contamination New prescriptions to be judged and avoided if possible. If prescribed explain disinfection with alcohol wipe before and after every hour of use.
16. Advise to keep all Low vision devices in cover, which can be disposed off frequently.
17. Appropriate ocular-Telehealth and web applications for visually impaired may be recommended as per the need during these COVID-19 times.

References:

1. <https://www.afb.org/blog/topic/coronavirus-covid-19>
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3. <https://www.iapb.org/knowledge/covid19/>
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Section 10: Guidelines for post COVID-19 Ocular Prosthesis Practice

Version: 1
w.e.f. 04th June 2020

Prepared by: Kuldeep Raizada and Deepa Raizada

- Wash hands thoroughly before handling the ocular prosthesis. Follow the new normal guidelines (Table 1).
- While using alcohol based sanitizers, make sure hands are dried well before touching the prosthesis.
- *Ocular prosthesis removal:* Remove with sanitized plunger and place the prosthesis after taking out from socket on the double layer of tissue paper. Ideal to use the disposable paper container and fill with water and discard the used water immediately after use.
- *Post removal storage:* Eye socket has thin layers of tissues with low immunity against infections. Contaminate prosthesis may compromise the socket health. Hence after removal, it is advised NOT to keep the prosthesis over a bare surface, such as table top, bed, etc. The eye prosthesis after removal from socket, may have mucous and attract pathogen which may be on other surface, also may contaminate other surfaces.
- *Disinfection of the ocular prosthesis:* Patient must clean eye prosthesis after every removal. It should be washed well with liquid soap and stored in diluted liquid soap (30% of water) and soaked for 5 minutes which will disinfect the eye prosthesis. Thereafter wash carefully with running water and wear it.
- Disinfect the suction cups in boiling water for 30 minute in boil water.
- Never use hand sanitizer on the surface of eye prosthesis and over the silicone surface as it can cause permanent damage.

In case patient has cold and cough, or if prosthesis patient experience mucous from eye socket, the patient has to discontinue use of prosthesis. Unwell patient should avoid touching the socket to prevent risk of infection. Patients on immune

Post COVID-19 Optometry practice guidelines

suppressants and chemotherapy must take extra care, wear mask throughout and not touch the eye. They need to maintain hygiene and cleaning process frequently.

Section 11: Guidelines for post COVID-19 Bio-medical waste management

Version: 1
w.e.f. 04th June 2020

Prepared by Amod Gogate, Nagaraju Konda

While the country is preparing for the post lockdown COVID-19 business operations, it is of interest to know how eye care practitioners plan to protect themselves against infections of COVID-19. During these COVID-19 times, the chance of COVID-19 contamination is high until population immunity has developed and/or vaccine is available. As per the MoHFW advisory for managing HCPs in COVID-19 and non-COVID-19 hospitals, shall use PPEs appropriate to their risk profile.² Optometrists involved in clinical care and management are classified under moderate risk, advised to use N-95 masks, gloves and protective eyewear. Whereas, during dispensing, it is advisable to wear N 95 mask, gloves and face shield to prevent the risk of contamination due to proximity.

Post COVID-19 lockdown, most eye care practitioners and their patients and customers will wear masks, gloves and other PPEs results in producing the biomedical waste (BMW) material. In addition, frequent disinfection of optometric and dispensing equipment and optometric investigations results in BMW, and this has always been considered hazardous because of its inherent potential to spread COVID-19. Hence, it is important to advise the guidelines on how to dispose these biological waste materials.

All elements of PPEs, e.g. masks, gloves and any other disposable material should be disposed every day as per guidelines of the local governing body.

- 3 PLY Masks, Head Caps, PPE Suits, and Disposable Gowns in Yellow bin
- Gloves in the red bin

PPE should be discarded in an appropriate waste container after use, and hand hygiene should be performed before putting on and after taking off PPE.

References

1. <https://www.mohfw.gov.in/pdf/GuidelinesonpreventivemeasurestocontainspreadofCOVID19inworkplacesettings.pdf>
2. <https://www.mohfw.gov.in/pdf/GuidelinesonrationaluseofPersonalProtectiveEquipment.pdf>
3. https://nhm.gov.in/New_Updates_2018/news/biomedical/Model_RFP.pdf

Section 12: Summary on post COVID-19 Global Optometry Practice Guidelines

Version: 1
w.e.f. 04th June 2020

Prepared by Amod Gogate, Nagaraju Konda, Monica Chaudhry

Optometrist as a primary eye care practitioner plays an important role in controlling the spread of COVID-19 during the post lockdown times. Based on the patient's immediate healthcare needs, optometrists should use their professional judgment to determine the timing and course of care, including referring to appropriate medical services, necessary preventive care, monitoring and management within their clinical competencies guidelines. The new normals should be adapted and implemented in the respective optometry and opticianry practices in delivering the eyecare services. Develop new systems to sterlize the offices, educate staff, post approved signage indicating new steps and protocols to ensure safety based on the available guidelines. Optometrists working in eye hospitals follow the guidelines provided by the All India Ophthalmological Society's document on ophthalmic practice guidelines in the current context of COVID-19 document. Optometrists and opticians are advised to follow the guidelines recommended in this document and refer to some of the detailed COVID-19 open resources for regular updates by national and international optometry authorities, International Agency for Prevention of Blindness, AIOS, MoHFW and the WHO for adoption and modifications of these recommendations.

The key points are:

- Follow the state, and national public health advice and guidance
- Use the professional judgement to assess the risk to deliver the safe care as per the professional standards
- Practice in line with the best available evidence, to recognise and work within the limits of their competence

Post COVID-19 Optometry practice guidelines

- Systems should be in place to procure, dispense, dispatch goods such as spectacles and CLs during COVID-19 emergency.
- Have appropriate indemnity arrangements relevant to their practice
- Make patient safety the first priority and raise concerns if services are not adequate
- Take precautions to protect identity vulnerable patients
- Educate patients on remote consultation
- Always follow the safe guidelines before e-consultation
- Working in safe systems. Take responsibility to contribute to setting up and maintaining effective systems to identify and manage risks.
- Provide online continue education programs, and assessment methods using appropriate tools and online platforms while maintaining professional optometry authority's guidelines.

We urge all the professional associations, optometrists, Opticians, and optometry educational institutions to adapt and implement these guidelines relevant to their professional responsibilities to deliver training and awareness among their communities.

Disclaimer :

Optical shops and optometry clinics have several overlapping activities and they often exist in the same premises. Therefore, guidelines are materially same for Optical shops and optometry clinics. Human understanding about the COVID-19 disease is improving and thereby guidelines are changing over time. This document may therefore be considered as a dynamic document that should be reviewed periodically failing which a sunset clause should be applied
